

TOWERING AHEAD

CLIENT : BlueSky
MAIN CONSTRUCTION COMPANY : Hickory Group
ARCHITECT : Hayball
STRUCTURAL ENGINEER : Rincovitch
CONSTRUCTION VALUE : \$90 million

The \$90M 50 La Trobe Street tower is the tallest prefabricated student accommodation project in Australia. The development includes a 43-level tower and a 7-storey building at the rear of the site consisting of over 700 beds across studio apartments, twin share and cluster rooms, as well as communal areas, study spaces and a café. At nearly 130m high, it is a pioneering project.

50 La Trobe Street is one of the world's tallest structures to be built using predominately prefabricated construction methods. The 43-storey tower and 7-storey building at the rear of the site comprise of over 700 bedrooms and associated student accommodation facilities, including café and study areas, across 22,000m² of floor area. A distinctive bronze curtain wall façade articulates the structure and features open air terraces at various levels.

“It was a challenging job, with the intricate multi-faceted façade system and particularly the construction of the concrete structure which stepped in and out at varying levels,” said Project Manager, Morrie Bahri.

Hickory Group were contracted to construct the development in October 2016 and started onsite demolition work in November. With up to 150 tradesmen onsite the high rise project can boast a successful accelerated construction period of just 20 months due to Hickory Group's innovative Hickory Building System (HBS).

HBS provides a prefabricated construction method that combines the installation of prefabricated elements with minimal in situ works to integrate the core, shear walls and façade into a unified structure.

“Hickory Building Systems has provided this project with a more efficient means of constructing our structure and façade systems. With HBS's ability to deliver an integrated structure/façade module we, and our client, benefitted from a more cost effective system and a significantly reduced construction programme,” explained Morrie.

As part of HBS, 629 Sync bathroom pods were prefabricated, delivered and craned

into position. All the pods were prefitted and finished with all plumbing, lighting, joinery, wall and floor coverings. HBS contributed to the La Trobe development being delivered eight months earlier than expected when compared to using traditional building methods.

However, HBS is not just for high rise developments; the system is extremely flexible and can be scaled to suit small projects. The Sync bathroom pods, manufactured in Hickory Group's own facility, are available to contractors working outside Hickory Group.

Hickory Group works across Australia, predominately in Victoria, with successfully completed commercial projects and residential developments such as the striking Banksia project in the Docklands.

Established in 1991, Hickory Group has evolved from a family owned business to a company with over 550 employees.

Hickory Group employs structural engineers, designers and CAD operators who specialise in providing innovative design and engineering solutions. Hickory also has an experienced façade management and skilled installation team that manage the design, procurement, fabrication and installation of all steel, aluminium, window and curtain wall systems. An inhouse team of general carpenters provides high quality construction fitouts and has earned Hickory Group a reputation as one of Australia's most experienced apartment builders.

Hickory Group has a crane division and a substantial crane and plant equipment hire business that includes elevated work platforms, hoists and other access modules. As a result Hickory Group can respond

rapidly to project needs, avoiding the costly delays involved in procuring plant and equipment at short notice.

Hickory Group's expertise in high rise construction projects was recognised in January 2018 when the Council of Tall Building and Urban Habitat (CTBUH) announced the finalist projects from around the world, with Hickory Building Systems (HBS) nominated for the Innovation Award.

“We work together with clients and consultants to achieve the desired outcome,” said Morrie.

For more information contact Hickory Group, 101 Cremorne Street, Richmond VIC 3121, phone 03 9429 7411, fax 03 9428 7376, website www.hickory.com.au



A PANEL OF EXPERTS

Speedpanel specialises in the manufacture, supply and distribution of lightweight panels that achieve superior fire and acoustic ratings.

In August 2017, Speedpanel began manufacturing the 5,000m² of panels needed for the 50 La Trobe Street development. Speedpanel supplied 51mm thick wall panels that were installed around and between Hickory Group's Sync bathroom pods achieving an FRL -/60/60. The 78mm thick panels were used as a scissor stair spine wall, eliminating the need for additional structural support and forming the stair pressurisation duct and where both require an FRL of -/120/120.

"The advantage of Speedpanel is the speed of the construction," explained James Armytage, Specification, Technical and Product Development Manager, "Speedpanel walls enable other trades to come in quicker and it fits in well with the prefabrication methods of the Hickory Building System."

Speedpanel offers an extensive range of panels catering for every application including for shaft and riser, plant room and façade substrate walls. The panels are appropriate for use in cinemas, auditoria and industrial environments to reduce noise entering and reverberating within a building. In some applications, 78mm thick panels can be used to achieve an acoustic rating of up to Rw80.

In other applications the panels were used at the excavation sites of the Melbourne and Sydney South West rail tunnels to build temporary acoustic sheds, and at the new Royal Adelaide Hospital to seal penetrations and meet BCA codes for fire rating.

They can easily be demounted and reused, are made from recycled materials and can be used as external cladding with Colorbond finishes available. The panels have varying densities of aerated concrete infill and are quickly fitted together with a simple tongue and groove system.

Speedpanel was established in Australia in 1998 and has offices in Victoria, Queensland and New South Wales as well as an extensive manufacturing facility in Bayswater. The team at Speedpanel offer you consultancy with respect to connection details and installation instructions to ensure their products meet the design requirements of your project.



For more information contact Speedpanel, 421 Dorset Road, (PO Box 145), Bayswater VIC 3153, phone 03 9724 6888, fax 03 9742 6889, email enquiries@speedpanel.com.au, website www.speedpanel.com.au



REVOLUTIONARY INNOVATION

PERI Australia Pty Ltd specialises in supplying engineered formwork and scaffolding solutions for high rise construction developments as well as civil works and infrastructure projects. For 50 La Trobe Street, PERI Australia supplied its DUO formwork system: reinforced plastic panels made of an engineered polytech that is stronger than usual polymers. The DUO formwork system is easy to install, strip and reset compared to traditional plywood formwork.

"The DUO formwork panels can be used for 50 to 90 pours as opposed to the usual five or six pours of plywood forms. With the long service life of the panels there is no need to constantly change the ply face to achieve a great finish. PERI Australia is set to revolutionise the formwork industry," said Sales Engineer, Scott Holmes.

PERI Australia had a team of three working on 50 La Trobe Street for eight months with regular site visits to ensure everything ran smoothly. The lightweight DUO formwork was transported via the alimak, leaving the crane free for other jobs, further contributing to the speed of the build. "We've found the material to be extremely lightweight and easy to handle, which has allowed us to work efficiently and keep to time and budget. PERI Australia is Hickory's supplier of choice

for formwork on all projects," commented Steve Cahill, Construction Manager of the Hickory Group.

PERI, the largest formwork and scaffolding company in the world is a German company, with offices in 62 countries. PERI Australia, established in 1998, also supply scaffolding for shoring, props and formwork systems.

PERI also supplied DUO to Polaris, 144-154 Pacific Highway (North Sydney), the 36-storey project at 100 Mount Street (Sydney), Northcliffe Residence (Gold Coast) and No.1 Fortitude Valley (Brisbane).

Recently PERI Australia were contracted to supply formwork at Castle Hill Station for Northwest Rapid Transit. The brief involved the design and supply of a system that could be preassembled, craned onto site at Castle Hill, then stripped and transported for reuse at the nearby Showground Road Station site.

For more information contact PERI Australia Pty Ltd, 116 Glendenning Road, Glendenning NSW 2761, phone 02 8805 2300, email info@periaus.com.au, website www.periaus.com.au